

Hibernacula Creation, A19 Roadside Enhancements

North East England

Sir Robert McAlpine

BIG Challenge 2015 submission category: Large scale permanent

Project overview

As part of the project, a 30 year concession to Design, Build, Finance and Operate (DBFO) 120km of the A19, between Dishforth in North Yorkshire and the Tyne Tunnel Sir Robert McAlpine have undertaken numerous measures to enhance the biodiversity of the road network.

This work is part of a long-term landscape planning and management strategy, creating meaningful and long-lasting benefits to the local ecology.

What were the biodiversity conditions on site, prior to the enhancement?

A large portion of the road network is within the County Durham Magnesian Limestone belt, an area of unique and internationally important habitat; however, prior to Sir Robert McAlpine's involvement when the A19 DBFO was initiated, there was limited consideration given to the existing biodiversity and the verges were planted with low biodiversity value standard highway grasslands and woodland plots.



Photo: Use of raked arisings to provide insulation

Were there any specific conditions that led to you carrying out this work?

Following the huge success of the initial wildflower meadows created in areas of underlying Magnesian Limestone which have shown significant increases in variety and number of indicator plant species, and the subsequent increase in invertebrate numbers on site, the need to increase the number of areas maintained as wildflower sites on the road network was recognised.

Of particular concern were the areas which boasted the correct ground conditions for indicator plant species, but which were being

overgrown by encroaching scrub. Apart from the initial scrub removal, the need to mow and remove grass, weed and wildflower arisings from site makes wildflower maintenance very labour intensive and can therefore be prohibitively expensive.

Before further meadows could be created, it was necessary to consider how the cost of these works could be accommodated, as there was no allowance in the core road maintenance contract, nor, was there any obvious route to apply for additional funding.

Furthermore, an annual maintenance regime needed to be considered, as

to fail to maintain these areas would see them become overgrown once more.

It was determined that if arisings could be responsibly left on site, this could release a resource to extend the areas maintained as wildflower rich.

What were the biodiversity measures taken?

Discussions with the consultant ecologist and Durham Wildlife Trust suggested that we utilise arisings from annual cutting to create habitat piles, refugia and hibernacula in non-sensitive parts of the site, where they will become a habitat in their own right for a variety of fauna, particularly small mammals, amphibians and invertebrates.

These piles were created by stacking tree and scrub clearance material, ensuring there were open voids in which animals could nest, hide or travel; grass cuttings could be laid over these habitat piles, creating an insulating layer and providing a variety of available habitat.

Arisings from subsequent years could be laid on top of the existing piles, ensuring the continued usability of the hibernacula and removing the need to remove arisings from site.



Photo: Habitat pile creation

Habitat piles were strategically positioned to provide a variety of habitat, provide shelter within otherwise open areas, to not compromise target species and to reduce manual handling of arisings to a minimum.

The more the labour requirement could be reduced for the removal of arisings, the more resource could be made available to increase the overall quantity of wildflower area.

Across three wildflower sites, eight such piles were created during autumn 2013. These were enhanced and a further 17 piles created during autumn 2014.

The piles are showing signs of habitation and activity

and have been included in the ecology monitoring programme to record mammal, bird, reptile and invertebrate life, both within and in the vicinity of the piles.

How would you best describe the project?

An enhancement.

Further information

SRM management have determined that these biodiversity enhancements be meaningful and long term.

Once the surveys have been completed, ecologist recommendations will be assessed, resulting in maintenance regime changes where required and additional habitat enhancement projects being proposed.

What was your personal motivation for carrying out the enhancement?

Sir Robert McAlpine have been involved in the on-going management of this section of the A19 for many years and the current contract runs for the next 12 years.

Despite the works described above being outside of the contractual obligations, there is strong recognition of the importance of the local biodiversity, and the role that this stretch of road can play in providing important improvements to the ecology.



Photo: Series of hibernacula